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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,386	01/21/2004	Tadafumi Yokota	Q79278	1322

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EXAMINER

WITHERSPOON, SIKARL A

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/760,386	YOKOTA ET AL.	
	Examiner	Art Unit	
	Sikarl A. Witherspoon	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The examiner has considered applicants' amendment filed November 5, 2004. Applicants' arguments with regard to the rejection of claims 1-3 under 35 U.S.C. 102(a), over Makita (JP2002220361) was found persuasive, and as such, the examiner has withdrawn said rejection. The examiner has however maintained the following rejections.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Bost (US 3,963,571).

Bost discloses a process wherein a C₁₈ 2-hydroxycycloalkanone (specifically 2-hydroxycyclooctadecanone is dehydrated to form cyclooctadecenone, which is subsequently reacted with hydrogen to form cyclooctadecanone. The reaction is conducted in the presence of zinc and hydrochloric acid (col. 2, lines 45-68 and col. 4, lines 50 to col. 5, line 3). The reference clearly anticipates the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2, although not anticipated, is rejected under 35 U.S.C. 103(a) as being unpatentable over Bost (US 3,963,571) and Nakajima et al (US 5,300,654) in combination.

The instant claim limits the acid catalyst used in the process of the present invention to a phosphoric acid catalyst or a solid acid catalyst.

Bost does not teach this limitation, as Bost only discloses the use of hydrochloric acid in his process. However, Nakajima et al., although by way of a different process, teaches that in addition to acids such as sulfuric acid and hydrochloric acid, acids such as phosphoric acid and oxalic acid can be used for dehydration (col. 5, lines 4-6).

The instant claim is therefore rendered obvious, as it would have been obvious to a person of ordinary skill in the art, at the time the present invention was made, to substitute another acid known to be useful as a dehydrating agent, such as phosphoric acid, for the hydrochloric acid used in the process taught by Bost, a person being motivated to make such a substitution by the reasonable expectation of successfully dehydrating a given compound using any acid known to have equivalence as a dehydrating agent.

The following new rejection was necessitated by applicants' amendment.

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Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bost and Nakajima et al as applied to claim 2 above, and further in view of Makita (JP 2002220361).

The instant claim limits the reduction catalyst employed in the process of the present invention to one selected from nickel, cobalt, copper, palladium, platinum, ruthenium, or rhodium. Bost does not teach these catalysts, as Bost only teaches a zinc catalyst; however, Makita teaches a similar process for preparing a ketone compound from an acyloin, wherein a palladium/carbon catalyst is employed.

It therefore would have been obvious to a person of ordinary skill in the art to substitute one catalyst, i.e., a palladium catalyst, for another catalyst that is art recognized as an equivalent reduction catalyst; one being motivated by the reasonable expectation of success of employing a reduction catalyst that is known to be equivalent to the zinc catalyst taught by Bost et al.

Response to Arguments

Applicant's arguments filed November 5, 2004 have been fully considered but they are not persuasive. First, with regard to the 102(b) rejection over Bost, applicants argue that the process disclosed by Bost is disadvantageous, and that it proceeds via a different reaction mechanism.

The examiner asserts that regardless of applicants' allegation that the process disclosed by Bost is disadvantageous, Bost clearly teaches dehydration of an acyloin to produce the corresponding unsaturated ketone, followed by reduction to the saturated

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ketone. Applicants' argument that the Bost process proceeds by a different reaction mechanism is found immaterial, since applicants are not claiming a reaction mechanism, but rather a dehydration/reduction process, and said process is disclosed by Bost; therefore, the examiner asserts that the rejection is proper.

With regard to applicants' argument that the Nakajima reference is drawn to the production of an unsaturated ketone from a beta-hydroxy ketone, which has a different molecular structure of an alpha-hydroxy ketone, or acyloin, as per the present invention, the examiner purports that the molecular structure of the hydroxyl-compound is immaterial. Nakajima was cited to teach that acids such as phosphoric acid and oxalic acid could be employed as a dehydrating agent. The examiner purports that it would have been obvious to a person of ordinary skill in the art that a hydroxyl-ketone, or acyloin, could be dehydrated with an acid, such as phosphoric acid, regardless of the position of the hydroxyl-group. The examiner therefore asserts that this rejection is also proper.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikarl A. Witherspoon whose telephone number is 571-272-0649. The examiner can normally be reached on M-F 8:30-6:30.

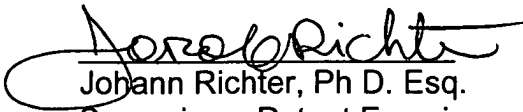
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sikarl A. Witherspoon
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Technology Center 1600

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